

THE GLOBE

LESSON 1: THE GLOBE — AN OVERVIEW



<i>continent</i>	<i>meridians</i>
<i>degrees</i>	<i>ocean</i>
<i>equator</i>	<i>parallel</i>
<i>globe</i>	<i>polar</i>
<i>hemisphere</i>	<i>regions</i>
<i>latitude</i>	<i>poles</i>
<i>longitude</i>	<i>Prime</i>
	<i>Meridian</i>

INTRODUCTION

In order for you to be a better citizen, it is important that you know about the world around you. How often while watching a news program, have you heard the name of a country and wondered where it was? Or while enjoying a movie filmed in a beautiful location have you thought that you would like to visit there someday? An understanding of the globe can help you readily identify a location and provide you with a visual or mental picture of it.

An overview of the **globe** will give you a basic understanding of the world in which you live. This overview will include the seven **continents**, four **oceans**, two **poles**, as well as **longitude** and **latitude** lines.

A GLOBE DEFINED

A *globe* is a sphere-shaped model of the earth. It is a representation of the Earth as it really is, round or like a ball. Looking at photos of the earth taken from space, you will only see half of the earth, or one **hemisphere**. A globe shows the whole earth. It shows the water and land formations on the earth's surface and helps you to understand natural events such as day and night and the seasons.

THE CONTINENTS

Continents are the seven large land-masses on the planet. It is believed that there existed only one continent over 225 million years ago. This continent slowly broke apart, shifted and drifted over millions of years until it assumed the shapes and positions of the seven continents that we recognize today. The seven continents from largest to smallest are Asia, Africa, North America, South America, Antarctica, Europe and Australia.

Asia is the largest continent in both size and population. It covers almost a third of the world's land area (16.9 million square miles) and has about three-fifths of its people (3.7 billion). It has 49 independent countries. Asia extends from Africa and Europe in the west to the Pacific Ocean in the east. The northernmost part of the continent lies within the frozen Arctic. In the south, Asia reaches into the steaming tropics near the equator.

Asia has some of the world's longest rivers, largest deserts, and thickest forests and jungles. The highest and lowest places on the earth are in Asia. Mount Everest, the highest, rises 29,028 feet above sea level and is along the Nepal-Tibet border. In contrast the Dead Sea shore, located between Israel and Jordan, is the world's lowest land, lying about 1,310 feet below sea level.

Africa is the second largest continent in area and population. Africa covers about one fifth of the world's land area (11.6 million square miles) and is home to one-eighth of its people (824 million). The continent is an immense plateau, broken by a few mountain ranges and bordered in some areas by a narrow coastal plain. It is a land of striking contrasts and great natural wonders. Tropical rain forests inhabit western and central Africa. The world's

largest desert, the Sahara, stretches across northern Africa. It occupies an area almost as large as the entire United States. Africa also has the world's longest river — the Nile. It flows more than 4,000 miles through northeastern Africa. Much of the rest of the continent is grassland located in eastern and southern Africa.

North America is the third largest continent in area (9.3 million square miles) comprising about one-sixth of the world's land area. It extends from the Arctic Ocean in the north to South America in the south. It ranks fourth among the continents in population. (Asia, Africa, and Europe are larger in population.)

The continent is roughly triangular in shape with the Arctic, Atlantic, and Pacific Oceans bordering its three sides. At its northern end, North America stretches more than 5400 miles from Alaska's Aleutian Islands to the Canadian province of Newfoundland. At the southern end of the continent, the narrowest parts of Panama are only about 30 miles wide.

South America is the fourth largest continent in area (6.8 million square miles). Only Asia, Africa, and North America are larger. It ranks fifth among the continents in population (346.9 million). Asia, Europe, Africa, and North America all have more people. South America covers about 12 percent of the world's land area and has about 6 percent of the total world population.

South America has nearly every type of landscape and climate, however, is only 600 miles from Antarctica. The world's largest tropical rain forest grows in the Amazon River Basin. This basin occupies about two-fifths of the continent. By contrast, the Atacama Desert in northern Chile is one of the driest places in the world. Also to be found are snowy peaks and active volcanoes rising along the crest of

the lofty Andes Mountains of western South America. Not to be forgotten are the rolling grasslands that stretch endlessly through much of Argentina and Venezuela. South America's varied landscape also includes spectacular waterfalls, huge lakes, and rocky, windswept islands.

South America is almost totally surrounded by water. The Caribbean Sea lies to the north and the Atlantic Ocean borders South America on the northeast and east. To the south, the Drake Passage separates South America from Antarctica. The Pacific Ocean is located on the west coast. South America borders land only at the Isthmus of Panama. This narrow strip of land links Central America with Colombia, in the northwestern part of South America.

Antarctica is an ice-covered continent located in the South Pole — the earth's most southerly region. Its nearly barren land forms the coldest and iciest region in the world. It is slightly colder than the region around the North Pole because the North Pole is located in the Arctic Ocean. The South Pole lies near the center of the Antarctic continent, on a high windy plateau of ice and snow. Antarctica's deepest ice is more than 10 times the height of the Sears Tower, one of the world's tallest buildings. Antarctica covers about 5.4 million square miles, making it larger in area than either Europe or Australia. But, it would be the smallest continent if it did not have its icecap. This icy layer which averages 7,100 feet thick increases Antarctica's surface area and also makes Antarctica the highest continent in terms of average elevation.

Stormy waters of the Atlantic, Indian, and Pacific Oceans isolate Antarctica from the other continents. The world's lowest temperatures have been recorded in Antarctica. Ice and snow cover 98 percent of the continent. Underneath the ice, Antarctica has mountains, low-

lands, and valleys — much like the landforms of other countries.

Europe is one of the smallest of the world's seven continents in area but one of the largest in population. It covers an area of about 4 million square miles and has a population of 707.8 million. Only Asia and Africa have more people. About one-eighth of the world's people live in Europe. Europe extends from the Arctic Ocean in the north to the Mediterranean Sea in the south and from the Atlantic Ocean in the west to the Ural Mountains in the east. Because Europe and Asia occupy the same landmass, they are sometimes collectively called Eurasia.

Australia is the only country that is also a continent. As a country, Australia is the sixth largest in the world. As a continent, however, it ranks smallest in size. It is a stable landmass that lies between the Indian and Pacific Oceans. The northern third of Australia lies in the tropics and is warm the year round. The rest of the continent has warm summers and cool winters. About a third of the country is desert. Since it lies south of the equator, its seasons are opposite those in the Northern Hemisphere.

OCEANS

Did you know that the Ocean is one continuous body of water interrupted by landmasses? It has been assigned four different names based on where it is divided by these landmasses: *Pacific Ocean*, *Atlantic Ocean*, *Indian Ocean* and *Arctic Ocean*.

The Pacific Ocean is the largest and deepest of the four oceans and covers a third of the globe, over 64 million square miles or 165.8 billion square kilometers. Its average depth is 12,900 feet. It is so large that all seven continents could fit in it and there would still be room for one more continent the size of Asia. It separates North and South America from Asia and Australia.

The Atlantic Ocean is the second largest body of water on the globe covering 33 million square miles or 86.7 billion square kilometers. It is continually widening and has an average depth of 11,700 feet. The Atlantic Ocean is bordered by Europe and Africa on the east and by North America and South America on the west.

The Indian Ocean is the third largest ocean and covers an area of about 28.3 million square miles or 73.3 billion square kilometers. At 12,600 feet deep, it is deeper than the Atlantic Ocean but smaller in size. It is the only ocean that is bordered by land on the north rather than water. On the eastern border is Indonesia and Australia. Africa is to the west and Antarctica to the south.

The Arctic Ocean is the smallest and shallowest of the four oceans. It is about 5 million square miles or 13 million square kilometers and averages about 4,000 feet deep. It is located at the top of the globe and is bordered primarily by northern Asia, Europe, and North America.

These four oceans are salt water and cover more than seventy percent of the earth's surface. They contain the highest mountain range, deepest valley, and some of the most unusual animals on earth.

POLES

The points on the globe representing the northernmost and southernmost points of the earth are the North Pole and South Pole. They are located on each end of the earth's imaginary axis. The areas around them are sometimes referred to as **Polar Regions** because they are around the North and South Poles. The North Pole is located in the Arctic and the South Pole is located in Antarctica. They are the coldest places on earth — frozen deserts covered in ice all year long. The North

Pole is the farthest point north. When looking down at a globe of the earth, it is shown at the top. When you look down on a globe of the North Pole, the landmasses of North America, Europe, Asia, and even parts of Africa can be seen. The South Pole is the farthest point south. A map centered on the South Pole features the continent of Antarctica surrounded by ocean. Because it is over land instead of water, the Antarctic region is much colder than the Arctic. The closest continents visible from this vantage point are South America, Africa, and Australia.

LONGITUDE AND LATITUDE

The Ancient Greeks used observation and mathematics to determine that the earth was round and not flat. That was nearly 2000 years before the earth could be photographed from space. They also developed a method for locating places on the earth. They came up with a system to divide the globe into 360 segments, called **degrees**. The imaginary vertical lines used to divide these parts are the longitude lines or **meridians**. They run from the North Pole to the South Pole and are equal in length. The imaginary horizontal lines on the globe are the latitude or **parallel** lines. These lines are parallel to each other and form complete circles around the globe. The horizontal lines of latitude and the vertical lines of longitude are further broken down into degrees, minutes, and seconds so that any point on earth can be located using the two lines that meet at that point on a globe.

In 1884, the **prime meridian**, or the longitude line numbered 0 degrees, was established at an international conference. It is the starting point for measuring distances east and

west around the globe. The prime meridian at 0 degrees and the 180th meridian or longitude line on the opposite side bisect the globe into eastern and western halves. Longitude lines east of the prime meridian are numbered 1 degree to 180 degrees east (E). This part of the earth is the eastern hemisphere. Longitude lines west of the prime meridian also numbered 1 degree to 180 degrees west (W) represent the western hemisphere. The prime meridian passes through the Royal Naval Observatory in Greenwich, a section of London, England.

The **equator**, or 0 degrees latitude, is an imaginary line that circles the globe at its widest point halfway between the North Pole and South Pole. The equator is the longest latitude line or parallel. Latitude is measured from 0 degrees to 90 degrees from the equator to the North Pole. This part of the earth from the equator to the North Pole is known as the **northern hemisphere**. Latitude is also measured from 0 degrees to 90 degrees from the equator to the South Pole. This part of the earth from the equator to the South Pole is known as the **southern hemisphere**. When any latitude line is given, it must be stated in north or south latitude.

CONCLUSION

Understanding the world around you will help you to be a better citizen. You are not isolated no matter where you live: in a small community, town, city or major metropolitan area. Your personal involvement and actions as a citizen can and will have a direct impact on the globe — the world around you and the world of tomorrow.
